EPA's Environmental Technology Verification Programs

Throughout its history, the U.S. Environmental Protection Agency (EPA) has evaluated technologies to determine their effectiveness in preventing, controlling, and cleaning up pollution. EPA is now expanding these efforts by instituting a new program, the Environmental Technology Verification Program—or ETV—to verify the performance of a larger universe of innovative technical solutions to problems that threaten human health or the environment. ETV was created to substantially accelerate the entrance of new environmental technologies into the domestic and international marketplace. It supplies technology buyers and developers, consulting engineers, states, and U.S. EPA regions with high quality data on the performance of new technologies. This encourages more rapid protection of the environment with better and less expensive approaches. ETV expands past verification efforts, such as the SITE program for remediation technologies and the Pathogen Equivalency Committee for sludge systems, into five pilot areas. In these pilots, EPA will utilize the expertise of partner "verification organizations" to design efficient processes for conducting performance tests of innovative technologies. EPA will select its partners from both the public and private sectors, including federal laboratories, states, universities, and private sector facilities. Verification organizations will oversee and report verification activities based on testing and quality assurance protocols developed with input from all major stakeholder/customer groups associated with the technology area. ETV is funded by the Environmental Technology Initiative, and one of the ETV pilot projects—Pollution Prevention and Waste Treatment Technologies—is described in this factsheet.

ETV PROGRAM GOAL

To provide purchasers and permitters with verified technology performance data from disinterested third parties under the auspices of the U.S. Environmental Protection Agency.

ETV CUSTOMERS

- ◆ Technology Users and Purchasers
- ◆ Technology Enablers
  - ▸ Permitters, Regulators
  - ▸ Consulting Engineers
- ◆ Technology Developers and Vendors

POLLUTION PREVENTION AND WASTE TREATMENT TECHNOLOGIES

Searching for Solutions

Innovative technologies face many challenges in reaching the marketplace. One of the most formidable is the barrier of multiple regulatory jurisdictions. Developers must frequently bear the expense of proving the efficacy of their technologies again and again as they move from one jurisdiction to another. This can be true even within State borders, as each permitting authority may require an independent scientific and engineering evaluation to be conducted as part of their permitting review. Consequently, permit applicants are often required to repeat costly studies for each jurisdiction. Moreover, the scope of studies often lack consistency from agency to agency and the resulting permit decisions may be inconsistent. To address these challenges,

the California Legislature in Assembly Bill 2060 authorized the California EPA (Cal/EPA) to initiate the first state technology verification and certification program in the nation. AB 2060 specified that technologies that may be verified include, but are not limited to, hazardous waste management technologies, site mitigation technologies, and waste minimization and pollution prevention (P2) technologies.

Pollution Prevention and Waste Treatment Technologies Pilot

Under this ETV pilot, Cal/EPA and the U.S. EPA will cooperatively evaluate and verify the efficacy of pollution prevention and waste treatment technologies. These evaluations will constitute the basis for issuance
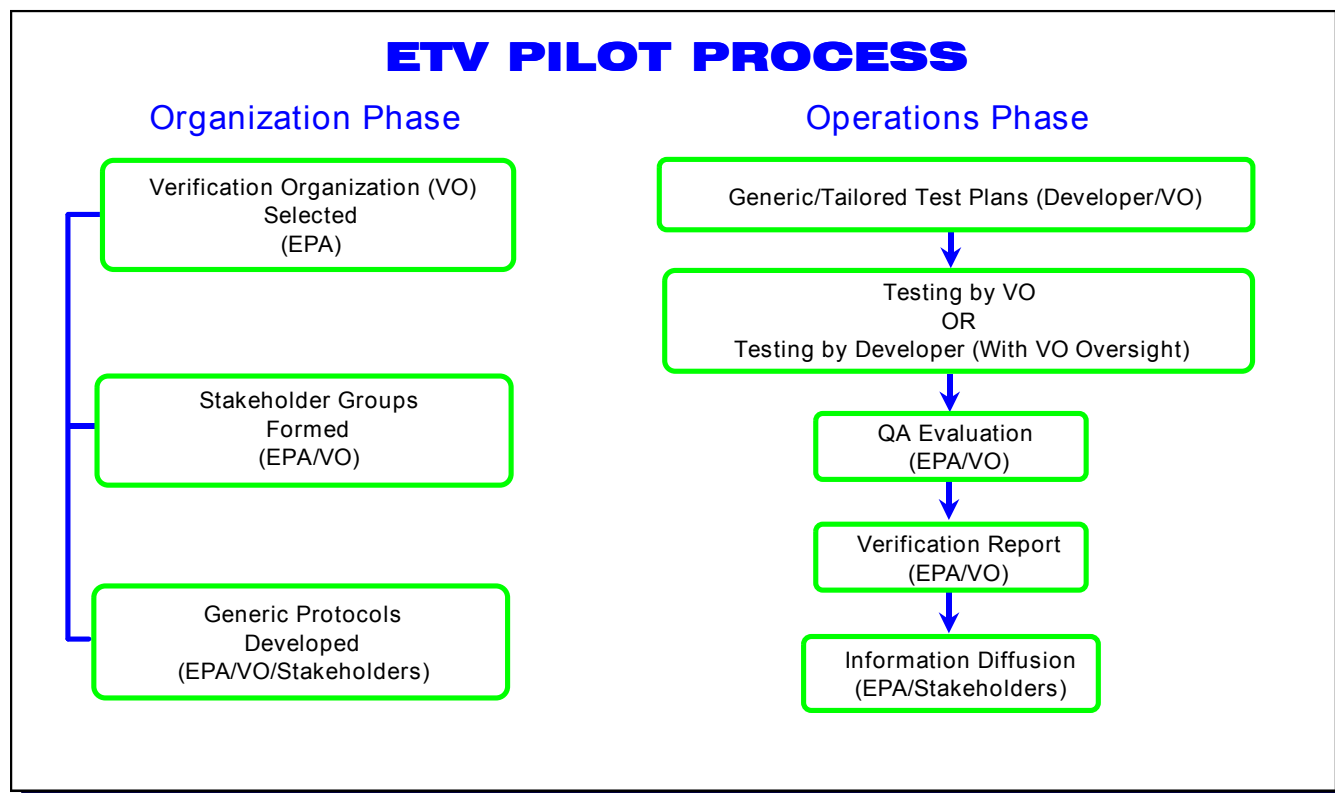
of a verification statement that will provide purchasers an unbiased appraisal and give regulatory agencies a technical evaluation designed to facilitate local permitting and use. This joint federal/state project will develop a national model to test, evaluate, and verify pollution prevention and waste treatment technologies. The technologies evaluated through this pilot may receive California certification, along with a performance evaluation report. To the extent possible, the pilot will focus on technologies for six Common Sense Initiative (CSI) industries—metal plating and finishing, electronics, petroleum refining printing, plus auto and iron and steel manufacturing.

U.S. EPA designed the CSI to achieve greater environmental protection at less cost by creating pollution control and prevention strategies on an industry-by-industry basis, rather than by the traditional pollutant-by-pollutant approach. The industries participating in the CSI form a sizable portion of the American economy, employ millions of workers, and account for a substantial percentage of the toxic re-

leases reported by U.S. industry. Each of these industries shares a commitment to work with the U.S. EPA and with national and grassroots environmental groups to find cleaner, cheaper, and smarter ways to protect public health and the environment.

How the P2 and Waste Treatment Pilot Works

Cal/EPA has established technology selection criteria that fit the current federal strategy for technology verification. Cal/EPA has announced its intentions to begin verification via a broad solicitation for applications. Technologies will be selected for performance verification on an on-going basis. Completed verification results will be evaluated following quality assurance protocols; approved verification results will then be distributed through reports and electronic mechanisms.

ETV PILOT PROCESS

Organization Phase

- Verification Organization (VO) Selected (EPA)
- Stakeholder Groups Formed (EPA/VO)
- Generic Protocols Developed (EPA/VO/Stakeholders)

Operations Phase

- Generic/Tailored Test Plans (Developer/VO)
  ↓
- Testing by VO OR Testing by Developer (With VO Oversight)
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- QA Evaluation (EPA/VO)
  ↓
- Verification Report (EPA/VO)
  ↓
- Information Diffusion (EPA/Stakeholders)

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ETI Environmental Technology Initiative

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